

(19) World Intellectual Property  
Organization  
International Bureau



(43) International Publication Date  
21 April 2005 (21.04.2005)

PCT

(10) International Publication Number  
**WO 2005/035358 A2**

- (51) International Patent Classification<sup>7</sup>: **B64C**
- (21) International Application Number:  
PCT/US2004/033217
- (22) International Filing Date: 6 October 2004 (06.10.2004)
- (25) Filing Language: English
- (26) Publication Language: English
- (30) Priority Data:
- |            |                               |    |
|------------|-------------------------------|----|
| 60/510,423 | 9 October 2003 (09.10.2003)   | US |
| 10/723,010 | 26 November 2003 (26.11.2003) | US |
| 60/562,639 | 14 April 2004 (14.04.2004)    | US |
| 60/570,578 | 12 May 2004 (12.05.2004)      | US |

Jonathan, Sidney [US/US]; 37 Kidder Ave, Somerville, MA 02144-2005 (US).

(74) Agent: **BOREALIS TECHNICAL LIMITED**; Rodney T. Cox, Chairman and CEO, 23545 NW Skyline Boulevard, North Plains, OR 97133-9204 (US).

(81) Designated States (*unless otherwise indicated, for every kind of national protection available*): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(71) Applicant (*for all designated States except US*): **BOREALIS TECHNICAL LIMITED** [—/US]; 23545 NW SKYLINE BLVD, North Plains, OR 97133-9204 (US).

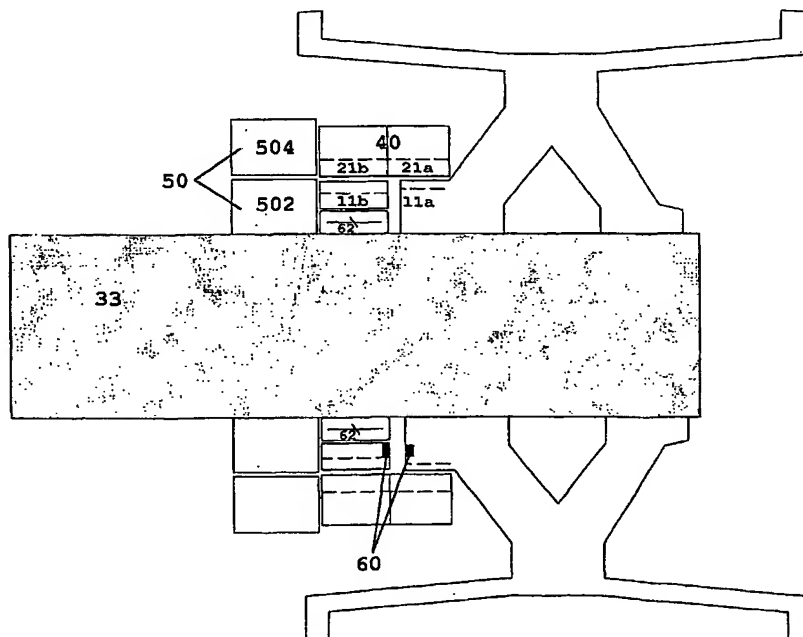
(84) Designated States (*unless otherwise indicated, for every kind of regional protection available*): ARIPO (BW, GH, GM, KE, LS, MW, MZ, NA, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI,

(72) Inventor; and

(75) Inventor/Applicant (*for US only*): **EDELSON,**

[Continued on next page]

(54) Title: GEARED WHEEL MOTOR DESIGN



(57) Abstract: The present invention is a compound planetary gear system which has a moveable sun gear and a lockable sun gear to change the gear ratio between a high gear ratio and a pseudo 1:1 slipping ratio. The system makes use of a ratchet and pawl mechanism to provide a safety backup for when the lockable sun gear is locked. The invention may be used to move the aircraft from a stationary position., for taxiing, and for pre-rotating the wheels prior to landing.



SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

*For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.*

**Published:**

- *without international search report and to be republished upon receipt of that report*